

## 2.4 RELEVANT BASELINE INFORMATION

1. This section of the report is intended to summarize many of the regulations and programs that exist in the baseline for economic activities in the proposed critical habitat. The coverage here is not intended to be exhaustive, but aims to capture the most significant regulations and programs that constitute a baseline for the critical habitat designation of wintering piping plovers.

### 2.4.1 Federal Programs

#### *National Flood Insurance Program (NFIP)*

1. The National Flood Insurance Program (NFIP) was established by Congress to provide affordable insurance to communities living in floodplains (including coastal areas). The program requires local communities to enact and enforce regulations which minimize property damage due to flooding. Within a participating community, homeowners have the option of purchasing insurance if they adhere to specified building ordinances and mitigation activities, including the integrity and location of the structure within the floodplain. Participation in the program is not mandatory, but, federally insured lenders cannot provide mortgages to houses within communities that do not participate in the program and some states, such as Florida, have written the ordinances prescribed by the NFIP into their own Coastal Zone Management Plans.<sup>1</sup>
1. Most development within critical habitat will occur in the zone designated by the NFIP as a Special Flood Hazard Area (SFHA). Any homeowner within a SFHA has the option of buying insurance if their structure is compliant with all regulations. All structures within the SFHA must be raised above the Base Flood Elevation (BFE), which is equal to the height that a flood has a one percent chance of attaining. Compliance with the BFE can be attained by either constructing the house on stilts or by building the structure on higher ground (landward and possibly outside of critical habitat). Within the SFHA, the land is designated "V-Zone" or "A-Zone" based upon the expected storm surges and flooding hazards. The V-Zone is subject to more damaging environmental impacts; flooding and waves greater than three feet, thus requiring new buildings to have a higher structural integrity and farther setback. The landward limit of a structure within a V-Zone is either the point where three foot waves have a one percent chance of occurring, the point where the eroded profile is three feet above the computed flood with a one percent chance of occurring, or the inland limit of the primary

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<sup>1</sup> The NFIP is a complex program with numerous rates, regulations and grandfather clauses. Because the purpose of this section is to examine limits to development that were in place before the designation of critical habitat, only certain aspects of the NFIP are included. This section discusses setback requirements for new structures only, as they will be more heavily scrutinized due to the designation of critical habitat.

fronted dune.<sup>2</sup> The A-Zone is subject to flooding and waves less than three feet. Construction within the A-Zone must be compliant with the BFE only.

### *The Coastal Zone Management Act*

1. The Coastal Zone Management Act of 1972 (CZMA) delegates authority to the states to manage their coastal areas in a manner which achieves "wise use of the land and water resources of the coastal zone, giving full consideration to ecological, cultural, historic, and aesthetic values as well as to needs for compatible economic development, which programs at least provide for the protection of natural resources." After a state establishes a Federally-approved Coastal Management Plan, the state has jurisdiction over all activities which occur in its coastal areas. Therefore all federal permits, such as those issued by the Corps under Section 10 or 404 of the Clean Water Act, must be consistent with the state coastal management plan for activities including dredging and beach nourishment. Besides granting authority to the states, the CZMA provides Federal funds to states for shoreline management activities (Sections 305 and 306). By encouraging state management of the shoreline, the CZMA opens the door for states to establish protections of their shoreline areas, and thus is an important part of the baseline regulations in areas designated as critical habitat for wintering piping plovers.
1. States outline different levels of protection and development in their coastal management plans. The eight states that contain critical habitat for wintering piping plovers have taken very different approaches to managing their shore environments, as discussed below (Section 2.4.2 of this report).

### *Oil and Gas Exploration*

1. Currently there is a federal moratorium on oil and gas exploration and development on the East Coast until 2012.<sup>3</sup> Therefore critical habitat along the coast of North Carolina, South Carolina, Georgia and the east coast of Florida will not have any incremental impact on the oil and gas industry. For the Western coast of Florida and the states of Alabama, Mississippi, Louisiana and Texas, there is state jurisdiction over critical habitat under CZMA.

## **2.4.2 State Regulations**

### *Florida*

1. The Beach and Shore Preservation Act applies to development on both the mainland

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<sup>2</sup> The H. John Heinz III Center for Science, Economics and the Environment, *Evaluation of Coastal Erosion Hazards*, Prepared for the Federal Emergency Management Agency April 2000.

<sup>3</sup> FY 1998, Department of Interior's Appropriation Act (sections 108-111 of Public Law 105-83).

and barrier islands of Florida.<sup>4</sup> The Act establishes the Coastal Construction Control Line (CCCL), the landward limit of the areas subject to the 100 year storm surge by three foot waves (the same as the V-Zone). All buildings seaward of the CCCL must meet more stringent structural regulations and must abide by a 30 year erosion setback from the Seasonal High Water Line (SHWL).<sup>5</sup> Other structures including streets and roads, parking areas, paved areas, and swimming pools must be located a minimum of 30 feet landward of the frontal dune, escarpment or coastal armoring structure. In addition, similar to the NFIP, all structures must be elevated above the BFE.

1. The Beach and Shore Preservation Act provides only the minimum level of development regulations. Counties and incorporated townships can impose more stringent zoning requirements on their coastal areas. As an example, Collier county had no additional setback requirements<sup>6</sup> while Lee County requires a minimum setback of 50 feet.<sup>7</sup> Regulations enacted by counties, incorporated townships, and as specified in the Beach and Shore Preservation Act severely limit development of private property on critical habitat containing the Primary Constituent Elements.<sup>8</sup>

1. The Energy Resources statute regulates the extraction of gas and oil within Florida. The Act prohibits any drilling activities on submerged land within bays or estuaries or within one mile of the coast line. Therefore no oil or gas development will occur within critical habitat.

#### *North Carolina*

1. The Coastal Area Management Act (CAMA) regulates development on sensitive waterways, which are designated as Areas of Environmental Concern (AEC). The AEC that include critical habitat are the Ocean Hazard System and the Estuarine System. For an Ocean Hazard System, CAMA has created three categories of permits: minor permits, major permits, and general permits.
1. Local governments review minor permits for single family homes, and approximately 1,000 of the permits are issued per year. A minor permit requires a landward setback from the

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<sup>4</sup> <http://www.dca.state.fl.us.ffcm/FCMP/issues/building.htm>.

<sup>5</sup> The setback of all structures from the Seasonal High Water Line must be greater than or equal to the rate of erosion for the property multiplied by 30 years. The thirty year erosion setback does not apply to shoreline protection measures, minor structures, piers, and single family dwellings that meet certain specifications. The Seasonal High Water Line is equal to 150 percent above the local mean high water mark.

<sup>6</sup> Personal Communication, Collier County Zoning Commission, March 29, 2001.

<sup>7</sup> Personal Communication, Lee County Zoning Commission, April 6, 2001.

<sup>8</sup> See Section 2.2, Constituent Elements of Critical Habitat and Potential Disturbances

first line of stable, natural vegetation. For a single family house, the setback is greater than or equal to the erosion rate multiplied by 30, with a minimum of 60 feet. For structures larger than 5,000 square feet the setback is greater than or equal to the erosion rate multiplied by 60 with a minimum setback of 120 feet. In areas where the erosion rate is greater than 3.5 feet per year the setback is greater than or equal to 105 feet plus the erosion rate multiplied by 30.

1. A major permit is required for structures that necessitate other state or federal permits, are greater than 60,000 square feet or for projects which cover over 20 acres. These structures face the same regulations as are required of a minor permit and are reviewed additionally by 14 other state and federal agencies. Each agency can make recommendations for project modifications that might be included as conditions within the final permit. A general permit is issued in lieu of a major permit if the project is routine and poses minimal threat to the environment (i.e. docks, bulkheads, marinas etc.).<sup>9</sup>
1. Development on land that is part of the Estuarine System requires a minimum setback of 30 feet from all Public Trust Waterways (mean high water for coastal areas) for all structural developments which are not water related (i.e., docks and jetties). The regulations included within CAMA will restrict private development on land containing the primary constituent elements.

#### *Texas*

1. Development of the Texas coastland is administered by the Coastal Management Program (CMP) as specified in the Coastal Coordination Act. The Texas coast is highly dynamic, consisting of the mainland, a lagoon, barrier islands and then the Gulf of Mexico. Since the mainland and the barrier islands receive different tidal influence and storm surges, the two sites have different zoning regulations.
1. The Open Beaches Act places within the public trust all of the land between mean low tide and the vegetation line or 200 feet landward (whichever is smaller). No development can occur on public trust land which impedes the use of or access to the beach. The Act restricts any development of permanent structures (excluding erosion control measures) seaward of the vegetation line. The vegetation line varies from a few feet to hundreds of feet from the mean high water.<sup>10</sup>
1. The Dune Protection Act creates Critical Dune Area (CDA), dunes and/or dune complexes on the Gulf of Mexico or which protect public beaches, submerged land and state

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<sup>9</sup> Personal Communication, staff biologist, North Carolina Division of Coastal Management, April 9, 2001.

<sup>10</sup> Personal Communication, Permitting Assistance Coordinator, Corpus Christi, General Land Office, March 2001.

owned lands from erosion. The CDA extends 1,000 feet from mean high water and prohibits building on or adversely altering these dunes. Dunes outside of the CDA can be modified, but any alteration will require some type of mitigation activity. Most importantly, the Dune Protection Act prohibits constructing housing units seaward of the vegetation line. These two acts will likely prohibit development of new housing units on critical habitat containing the Primary Constituent Elements.

1. The state of Texas owns all submerged lands 10.3 miles from mean high water which are not held in public trust. The state can lease these lands for oil and gas exploration to applicants who receive permits from the State of Texas and the Corps. The state prohibits structures for oil or gas exploration between the vegetation line and mean low water.

### *South Carolina*

1. The Office of Ocean and Coastal Resource Management uses the Coastal Tidelands and Wetlands Act (CTWA) and the Beachfront Management Act (BMA) to regulate coastal development and conservation activities. The CTWA states that the whole coastal region is a "Critical Area" with numerous designations, including the Standard Erosions Zones and the Inlet Erosion Zone and establishes a baseline within each zone.

1. A **Standard Erosion Zone** is shoreline which is subject to coastal processes, has fairly constant range of profiles and sediment characteristics, and is not directly influenced by tidal inlets or shoals. The baseline is equal to crest of the primary sand dune.<sup>11</sup>

1. An **Inlet Erosion Zone** is shoreline along or adjacent to tidal inlets which is directly influenced by the inlet and its associated shoals. The baseline is equal to the most landward position of the shoreline in the most recent 40 years.<sup>12</sup>

1. The CTWA strictly regulates the development of permanent structures such as walkways, decks, docks, marinas and erosion protection devices in front of the baseline.<sup>13</sup> The BMA requires that all habitable structure be setback from the baseline a distance equal to the erosion rate multiplied by forty, with a minimum setback of twenty feet.<sup>14</sup>

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<sup>11</sup> In cases regions without dune systems, the baseline is estimated based upon the location of the dune in neighboring regions. The location of the baseline is re-evaluated every ten years.

<sup>12</sup> If the inlet is stabilized with erosion control measures than the baseline is the same as the Standard Erosion Zone.

<sup>13</sup> The baseline is re-evaluated every ten years.

<sup>14</sup> Some exceptions to the setback line do exist. Additions to habitable structures can be built seaward of the setback line.

1. The BMA states that the impact on endangered species<sup>15</sup> must be "reviewed as a part of the permit and certification processes administered by the Council and Council approval of local beachfront management plans."<sup>16</sup> The BMA also regulates activities within critical habitat, prohibiting the removal of sand from sand spits and offshore sandbars, requiring leashes, limiting human access during sensitive seasons, requiring that all beach nourishment activities been designed to minimize impact on endangered species, and it designates the land as a Geographic Areas of Particular Concern (GAPC). A GAPC is an area of unique natural resource value or special historical, archeological or cultural significance that are of such importance that they merit special consideration during review of permit applications.

1. According to the CTWA, all initial and maintenance dredging must occur between December 1 and March 1. All new structures (i.e. marinas) which require dredging must have permanent upland areas set aside for dredge spoil disposals. For older structures, dredge spoils will be placed either uplands or in the ocean with the filling in of wetlands being the last resort.

### *Alabama*

1. The Alabama Coastal Management Plan (ACAMP) gives the Alabama Department of Environmental Management the authority to regulate the Coast Area.(all land seaward of the continuous 10 foot contour).<sup>17</sup> ACAMP has created the Construction Control Line (CCL) which is 40 feet landward of the crestline (interconnected peaks of the primary dune system). ACAMP prohibits the construction of any new structure (motel, condominium, house, building, bulkhead, deck, pool, parking lot, gazebo) between mean high tide and CCL.<sup>18</sup> Additionally no structures can be built which adversely impacts the dune system. The

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<sup>15</sup> The BMA specifically lists the piping plover as an endangered species.

<sup>16</sup>Beachfront Management Act, section 5(b)

<sup>17</sup> Administrative Code 335-8-2, Provisions Related to Coastal Activities

<sup>18</sup> Numerous exceptions to this regulation do exist.

construction of piers, marinas, docks, jetties, and erosion control measures is also strictly regulated.

1. Some coastal areas in Alabama are designated as Special Management Areas which entitles them to "special management and regulatory emphasis due to their unique or special values, characteristics or significance."<sup>19</sup> Any oil or gas exploration requires a permit from the Alabama Department of Environmental Management, ACE, and the Alabama Oil and Gas Board.

### *Georgia*

1. The Shore Protection Act (SPA) gives ownership of all submerged land to the state of Georgia while regulating development in the dynamic dune field, the area between mean high tide and either the first live native tree over twenty feet tall or a structure existing on July 1, 1979.<sup>20</sup>
1. A permit is required to build any structures within a dynamic dune field. Although most construction of houses occurs landward of the dunes, it is possible build on the beach or on the dune complex, but this activity is discouraged by the Georgia Coastal Resources Division.<sup>21</sup> When developing a lot within the dynamic dune field, the SPA requires that one third of the lot must remain in its natural state. Additionally, the different counties and incorporated townships require that all housing structures be setback from seven to twenty feet from the boundaries of the lot.<sup>22</sup> Other structures such as dune crossover, jetties and piers require permits while private docks are not allowed in the dynamic dune field, though they are allowed on marshlands (not likely to contain the primary constituent elements).

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<sup>19</sup> Administrative Code 335-8-1-.02

<sup>20</sup> Administrative Code 1981, 12-5-231

<sup>21</sup> Personal Communication, employee at the Georgia Coastal Resources Division, April 19, 2001.

<sup>22</sup> Personal Communication, employee at the Georgia Coastal Resources Division, April 19, 2001.

## *Louisiana*

1. The Louisiana State and Local Coastal Resources Management Act (SLCRMA) of 1978 regulates development in the Coastal Zone. The SLCRMA creates a Coastal Use Permit (CUP) which is required for activities including dredging, disposal of dredge spoils, bulkhead construction, shoreline maintenance and other development projects. The application process takes a minimum of 47 days, assuming that all necessary material is included with the application.
  
1. Oil and gas do not require CUP permits if the project does not cause any adverse environmental alterations. Instead they are issued In-Lieu permits. Oil and gas exploration shall, to the maximum extent practicable, avoid sensitive wildlife and vegetation areas. Any alterations of wetlands will require mitigation activities, such that no net loss in wetlands occurs.
  
1. Structures for industry, commercial, residential, and recreation must be built on lands elevated at least five feet above sea level or within fastlands.<sup>23</sup> Furthermore the regulations stipulate that such structures may also be constructed on lands "which have foundation conditions sufficiently stable to support the use, and where flood and storm hazards are minimal or where protection from these hazards can be reasonably well achieved, and where the public safety would not be unreasonably endangered; and: a) the land is already in high intensity development use, or b) there is adequate supporting infrastructure, or c) the vicinity has a tradition of use for similar habitation or development."<sup>24</sup> None of these structures will require CUP permits. SLCRMA gives the parish governments the authority to initiate more stringent coastal regulations and to issue permits in their local coastal zone if they first have a program approved by the state. Two parishes, Vermillion and St. Mary were contacted and

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<sup>23</sup> Fastlands are lands surrounded by levees.

<sup>24</sup>Louisiana Administrative Code, Title 43 (Natural Resources), Chapter 7 (Coastal Management), Section 711 (1996).



in both cases the official stated that the parish had no additional regulations, all housing in the coastal areas had to follow the state and NFIP regulations.<sup>25</sup>

1. Land within the Coastal Zone which contains unique and valuable characteristics may be designated as a Special Area Management. This designation allows the governor to appoint a task force to recommend guidelines for the area.

### *Mississippi*

1. The Coastal Wetland Protection Act (CWPA) regulates coastal development in the state of Mississippi. The state owns all lands below the mean high tide and any development activity requires a permit from the Mississippi Department of Marine Resources (DMR) and the Corps. Any housing structure requires permits from the Corps (if necessary), the state, and the county or the township if it has incorporated. For example in Jackson county, permits are required for any construction activity with the 100 year flood zone (similar to the NFIP program). Similarly, an incorporated township, The City of Waveland, requires that all houses be constructed two feet above the Case Flood Elevation, as specified under the NFIP program, if the house is constructed within a floodplain.<sup>26</sup>
1. Coastal development on land containing the primary constituent elements is rather sparse. Most of the beaches containing the primary constituent elements are man made, require periodic renourishment, and are owned by the one of three municipalities in the coastal region.<sup>27</sup> The coastal development that does occur near critical habitat is usually North of I-90

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<sup>25</sup> Personal Communication, Vermillion Parish Police Jury April 19, 2001. Personal Communication, St. Mary Police Jury April 19, 2001.

<sup>26</sup> Personal Communication, City of Waveland Permit Office, April 25, 2001.

<sup>27</sup> Personal Communication, Biologist, Mississippi Department of Marine Resources, April 12, 2001.

(an area which does not contain the primary constituent elements of critical habitat).<sup>28</sup>

1. For oil and gas exploration, permits are required from the Mississippi Oil and Gas Board. The state requires directional drilling in environmentally sensitive areas, including the shorelines of barrier islands or beaches.

### 2.4.3 Socioeconomic Profile of Designated Area

1. The designation spans a diverse array of demographic characteristics. Exhibit 2-3 lists the population size, per capita income, houses permitted in 1999 per capita and persons per square mile for all the counties which have critical habitat designated within their boundaries and for the state as a whole. The percent of the population living within a county containing critical habitat ranges from less than five percent to over 30 percent per state. Of the 57 counties, 16 have a higher per capita income, 23 have a higher fraction of housing units permitted per capita and 28 have more persons per square mile than their respective state averages. The data suggests that the counties containing critical habitat are representative of the socio-economic diversity of the different states.

**Exhibit 2-3**

**BASELINE CHARACTERISTICS OF ALL COUNTIES CONTAINING CRITICAL HABITAT**

**PIPING PLOVER WINTERING POPULATION**

State	County	Population Size	Income (Per Capita)	New houses permitted in 1999 per capita	Persons per Sq. Mile
<b>TX</b>	<b>Texas</b>	<b>20,044,141</b>	<b>\$23,707</b>	<b>0.0073</b>	<b>76.5</b>
TX	Cameron	329,131	\$12,857	0.0077	363.4
TX	Willacy	19,650	\$11,945	0.0029	32.9
TX	Kennedy	436	\$25,348	Not Available	<1
TX	Kleberg	29,680	\$16,445	0.0004	34.1
TX	Nueces	315,469	\$20,673	0.0032	377.4

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<sup>28</sup>Personal Communication, employee, Mississippi Department of Marine Resources, April 25, 2001.

TX	San Patricio	71,636	\$15,729	0.0035	103.6
TX	Aransas	23,129	\$19,511	0.0029	91.8
TX	Calhoun	20,426	\$17,799	0.0027	39.9
TX	Matagorda	37,828	\$17,740	0.0022	33.9
TX	Brazoria	234,303	\$21,285	0.0085	168.9
TX	Galveston	248,469	\$22,737	0.0085	623.2
<b>NC</b>	<b>North Carolina</b>	<b>7,650,789</b>	<b>\$23,168</b>	<b>0.0111</b>	<b>157</b>
NC	Dare	29,640	\$21,624	0.0276	77.7
NC	Hyde	5,828	\$18,364	0.0017	9.5
NC	Carteret	60,031	\$20,798	0.0113	113
NC	Onslow	142,480	\$16,900	0.0068	185.8
NC	Pender	40,293	\$18,781	0.0088	46.3
NC	New Hanover	150,895	\$23,977	0.0153	758.6
NC	Brunswick	71,214	\$17,978	0.0215	83.3
<b>SC</b>	<b>South Carolina</b>	<b>3,885,736</b>	<b>\$20,508</b>	<b>0.0093</b>	<b>129</b>
SC	Horry	178,550	\$21,185	0.0267	157.5
SC	Georgetown	54,934	\$20,173	0.0158	67.4
SC	Charleston	319,921	\$21,670	0.0140	348.7
SC	Colleton	37,659	\$16,017	0.0035	35.6
SC	Beaufort	112,973	\$25,599	0.0261	192.5
<b>GA</b>	<b>Georgia</b>	<b>7,788,240</b>	<b>\$23,882</b>	<b>0.0115</b>	<b>134.5</b>
GA	Chatham	225,662	\$24,320	0.0074	512.4
GA	Liberty	59,694	\$13,491	0.0053	115
GA	McIntosh	10,114	\$14,410	0.0143	23.2
GA	Glynn	67,945	\$25,346	0.0130	160.9
GA	Camden	47,032	\$13,664	0.0104	74.7
<b>FL</b>	<b>Florida</b>	<b>15,111,244</b>	<b>\$24,799</b>	<b>0.0109</b>	<b>280.2</b>
FL	Escambia	282,432	\$19,852	0.0068	425.6
FL	Santa Rosa	120,952	\$19,527	0.0082	119.1
FL	Bay	147,958	\$20,392	0.0071	193.7

**Exhibit 2-3 (continued)**

**BASELINE CHARACTERISTICS OF ALL COUNTIES CONTAINING CRITICAL HABITAT**

**PIPING PLOVER WINTERING POPULATION**

<b>State</b>	<b>County</b>	<b>Population Size</b>	<b>Per Capita Income</b>	<b>Houses permitted in 1999 per capita</b>	<b>Persons per Sq. Mile</b>
FL	Gulf	13,562	\$16,403	0.0084	24
FL	Franklin	9,978	\$17,062	0.0103	18.7
FL	Taylor	19,049	\$16,488	0.0036	18.3
FL	Pasco	330,704	\$20,629	0.0116	443.9
FL	Pinellas	878,499	\$28,367	0.0037	3135.3
FL	Hillsborough	940,484	\$23,719	0.0156	894.8
FL	Lee	400,542	\$25,568	0.0220	498.4
FL	Collier	207,029	\$36,210	0.0364	102.2
FL	Martin	126,731	\$36,301	0.0088	227.9
FL	Monroe	79,941	\$29,657	0.0051	80.2
FL	Volusia	425,601	\$20,389	0.0091	384.8
FL	Duval	738,483	\$24,355	0.0087	954.2
FL	Nassau	56,811	\$24,045	0.0115	87.2
<b>AL</b>	<b>Alabama</b>	<b>4,369,862</b>	<b>\$20,672</b>	<b>0.0044</b>	<b>86.1</b>
AL	Mobile	399,652	\$19,371	0.0053	324
AL	Baldwin	135,820	\$22,431	0.0188	85.1
<b>MS</b>	<b>Mississippi</b>	<b>2,768,619</b>	<b>\$18,098</b>	<b>0.0046</b>	<b>59</b>
MS	Hancock	41,518	\$16,655	0.0023	87.1
MS	Harrison	178,567	\$20,285	0.0077	307.3
MS	Jackson	133,120	\$18,523	0.0115	183.2
<b>LA</b>	<b>Louisiana</b>	<b>4,372,035</b>	<b>\$20,458</b>	<b>0.0041</b>	<b>100.4</b>
LA	Cameron	8,969	\$16,725	0.0046	6.8
LA	Vermilion	52,258	\$17,303	0.0035	44.5
LA	St. Mary	53,500	\$18,027	< 0.0001	92.7
LA	Terrebonne	105,128	\$19,043	0.0039	83.8
LA	Lafourche	89,463	\$19,266	0.0037	82.5
LA	Jefferson	447,790	\$23,850	0.0021	1463.8
LA	Plaquemines	26,094	\$19,580	0.0058	30.9
LA	St. Bernard	64,406	\$19,113	0.0024	140.6

Source: <http://www.fedstats.gov>

Population Size and Persons per Square Mile data is from 1999

Per capita Income is from 1997

